Revised Draft 2016 Air Quality Management Plan















Summary of Revisions

October 2016

Since the release of the Draft 2016 AQMP in June 2016, the SCAQMD received over 67 comment letters and comments and feedback from the public and stakeholders at over 30 public meetings. The following provides a summary of key changes included in the Revised Draft 2016 AQMP in response to the comments received.

Major Revisions

- The previous, incentive-only stationary source measures, CMB-01 (NOx Stationary Sources) and CMB-02 (Space & Water Heating) now anticipate development of future regulations, with incentives to accelerate technology deployment.
- Added a regulatory approach to CMB-01 to require alternatives to the installation of new diesel backup generators
 in feasible applications, with a priority on maximizing emission reductions utilizing zero emission technologies such
 as batteries and fuel cells.
- For CMB-02, added language calling for a priority on maximizing emission reductions utilizing **zero emission** technologies wherever cost effective and feasible, and near-zero emission technologies in all other applications. The measure recognizes the need for an analysis to consider **life-cycle** in-basin emissions (including GHGs) related to energy/fuel production and transmission under future energy pricing and electricity generation scenarios.
- Modified the NOx **RECLAIM** measure (CMB-05) to emphasize consideration of a long-term transition of the program to a command-and-control regulatory structure, essentially a sunset of RECLAIM.
- Clarity has been added to the **facility-based measures** (MOB-01 MOB-04) in terms of process and schedule. These measures are proposed to help implement the State SIP strategy "Further Deployment of Cleaner Technologies" measures and provide specific implementation approaches to the State measures. The proposed approach is to work collaborative with affected stakeholders, CARB, U.S. EPA, environmental and community organizations to identify actions that potentially result in additional emission reductions to help meet the emission reduction commitments associated with the State SIP "Further Deployment" measures. Identified emission reductions may be credited to the SIP as part of Rate-of-Progress Reporting and in future AQMP revisions. Any emission reductions proposed to be included in the SIP will require development of enforceable commitments (as defined by U.S. EPA). The progress in identifying actions will be reported to the SCAQMD Governing Board six months after Plan adoption. After one year, SCAQMD staff will report to the SCAQMD Governing Board on overall progress. If sufficient actions or progress are not envisioned to occur in a timely manner, SCAQMD staff will seek the SCAQMD Governing Board's direction as to whether to proceed with formal rule development or develop alternative implementation processes.
- Added enhanced description of SCAQMD Clean Fleet Vehicle Rules, including the potential for new or modified rules
 to focus on zero- and near-zero emission vehicles, within the SCAQMD legal authority.
- Included a commitment to participate in the **Title 24 net zero energy** efficiency development process for new residential construction in order to advocate for criteria pollutant and GHG metrics.
- Clarified that TBD measures for the SCAQMD stationary source measures may require further emissions inventory
 and technology feasibility evaluations, but if emission reductions are eventually achieved, they could be applied
 toward contingency, a shortfall in reductions from other measures or, credited toward rate-of-progress
 requirements.

	Specific Revisions
Executive Summary	 Updated Plan Objectives to incorporate new principles per comments received: In an effort to support zero emission technologies while maintaining technology neutrality, prioritize maximizing emission reductions utilizing zero emission technologies, if cost effective and feasible, and near-zero emission technologies in all other applications. SCAQMD will make full use of its legal authorities to seek a cleaner air future. Embrace strategies to reduce toxic risk impacting local neighborhoods and disadvantaged communities adjacent to goods movement and transportation corridors.
	New "Regulatory Measures" section that discusses how the Plan proposes robust NOx reduction regulations combined with incentives to accelerate deployment of cleaner technologies. The new section also outlines the NOx reductions achieved to date and expected in the future from existing regulations.
	Enhanced the "Incentive Funding" section to clarify that the purpose of the incentive programs are to advance advanced technology deployment at a pace that is not feasible through regulatory actions alone, which is critical to meet fast approaching attainment deadlines.
Chapter 1 (Introduction)	Added the recent U.S. EPA clean data determination for South Coast Air Basin attaining the 1997 annual and 24-hour PM2.5 standards.
Chapter 2 (Air Quality)	The air quality data for all pollutants was updated to reflect the latest 2015 data.
Chapter 3 (Emission Inventory)	The base year (2012) and future baseline emissions were updated reflecting the latest data from the region's airports, CARB and SCAG.
Chapter 4 (Control Strategy)	Enhanced the policy of maximizing emission reductions utilizing zero emission technologies, if cost effective and feasible, and near-zero emission technologies in all other applications, and to consider life cycle in-basin emissions related to energy/fuel production and transmission.
	Clarified that TBD stationary source measures require further feasibility evaluations, but if emission reductions are eventually achieved, they could be applied toward contingency, a shortfall in reductions from other measures or, credited toward rate-of-progress requirements.
	Revised terminology for categorizing measures, such as changing "Additional Stationary Source Measures" to "Stationary Source Regulatory Measures."
	The previous, incentive-only stationary source measures, CMB-01 (NOx Stationary Sources) and CMB-02 (Space & Water Heating) now anticipate development of future regulations, with incentives to accelerate technology deployment.
	The discussion of CMB-01 is enhanced to include more specific examples of equipment replacements, and the potential use of incentives for process changes such as biogas cleanup.
	The discussion of CMB-02 is enhanced to prioritize maximizing emission reductions utilizing zero emission technologies and consider life-cycle emissions in assessing these technologies.

	Specific Revisions
	Landfill and wastewater facilities were added to the CMB-03 (Non-Refinery Flares) synopsis.
	Modified the NOx RECLAIM measure (CMB-05) to emphasize consideration of a long-term transition of the program to a command-and-control regulatory structure, essentially a sunset of RECLAIM.
	Added participation in development of the Title 24 net zero energy residential building standards as part of ECC-03 (<i>Residential Energy Use</i>).
	Added discussion in FUG-01 (<i>Leak Detection</i>) to explore opportunities where Smart LDAR might substitute for existing LDAR programs.
	The purpose of the SCAQMD mobile source measures was clarified as assisting in implementing CARB's "Further Development of Cleaner Technologies" measures and that emission reductions are part of CARB's SIP strategy.
	More examples of commercially available zero emission vehicles and equipment are provided including plug-in hybrids, battery-electric and fuel cells.
	Clarity on the implementation of SCAQMD mobile source/facility-based measures was added including the public process, identifying actions (voluntary and regulatory), and reporting back to the SCAQMD Governing Board six months after Plan adoption. If no progress is made after one year, staff will seek the SCAQMD Governing Board's direction as to whether to proceed with formal rule development or develop alternative implementation processes.
	Added enhanced description of SCAQMD Clean Fleet Vehicle Rules, including the potential for new or modified rules to focus on zero- and near-zero emission vehicles, within the SCAQMD legal authority
	Moved the adoption date of the facility-based measures, retirement of older on-road vehicles, and the credit generation programs to 2018 with implementation starting in 2019.
	The MOB-01 (<i>Ports</i>) measure now notes that enforceable commitments will be developed through a public process.
	Added to MOB-02 (<i>Rail Yards</i>), MOB-03 (<i>Warehouses</i>), and MOB-04 (<i>Airports</i>) measures that if the emissions reductions are going to be credited into the SIP, enforceable commitments need to be made pursuant to U.S. EPA requirements.
	Allocation of \$150 million from the GHG Reduction Fund to invest in zero and near-zero vehicles was added as part of the MOB-07 (<i>Light- and Medium-Heavy Duty Vehicles</i>) synopsis.
	MOB-08 (<i>Retirement of Older On-Road Heavy Duty Vehicles</i>) specifically references the potential development of new or expanded fleet rules.
	MOB-09 (On-Road Credit Generation) and MOB-13 (Off-Road Credit Generation) specifically lists those facilities eligible for the use of credits generated under the measures. Generated emission reduction credits will not be eligible for trading between mobile and stationary sources.
	Added to MOB-14 (<i>Incentives</i>) to aid compliance with the integrity elements required by U.S. EPA for SIP credit for the reductions achieved.

	Specific Revisions
	BCM-01 (<i>Commercial Cooking</i>) is now classified as a contingency measure if the annual average PM2.5 standard is not achieved by 2025.
	To comply with RACM requirements, BCM-04 (<i>Manure Management</i>) will require modifications to existing Rule 223 regarding lowering the threshold for large confined animal facilities.
	Replaced previous discussion of U.S. EPA PM2.5 implementation rule requirements with the new, recently approved planning requirements including adoption of control measures for direct PM2.5 and the four PM2.5 precursors, and tracking of milestones achieved under the Reasonable Further Progress analysis.
	Consideration of existing Rule 445 (Wood Burning Devices) as a potential contingency measure was added given that the rule requires mandatory basin-wide burning curtailment only if the area fails to meet the standard.
	Emission reduction commitment tables were updated to include the specific control measures, with the caveat that the commitment is for aggregate reductions, and any shortfall in individual measures could be substituted with reductions from other control measures.
	Emission reductions for PM2.5 and ozone attainment years have been updated to reflect the latest emission inventory, emission reductions, and modeling results.
	Clarification was added regarding CARB's "Further Deployment of Cleaner Technologies," in that it provides an upper limit in the necessary funding if no other approaches achieve the emission reductions. Four implementation approaches are proposed: incentives, future regulations, operational efficiency benefits, and intelligent transportation systems.
	Mobile source funding tables were updated to reflect the latest technical data.
	Added incentive funding for small off-road engines identified in the State SIP Strategy "Further Deployment of Cleaner Technologies" measure for off-road equipment.
Chapter 5 (Future Air Quality)	Remind reader that final modeling scenarios are ongoing and will be included in the next version of the Plan.
	Updated figure to reflect control strategy reductions starting in 2017 (not 2012).
Chapter 6 (CAA Requirements)	Clarified the RACM and BACM analyses for all potential control measures including economic and technological feasibility. Those areas where improvements were possible were included as part the commitments in the Plan.
	As per the requirement in the PM2.5 Implementation Rule, the four PM2.5 precursors were evaluated for potential emission reductions control measures. Ammonia is being newly proposed to be regulated under federal new source review requirements.
Chapters 7 (Coachella) and 8 (Future Requirements)	No change from Draft Plan.

	Specific Revisions
Chapter 10 (Energy)	Updated coal statistics under the "Electricity Sources" section.
	Added more references regarding renewable power, manageable loads and energy storage, including battery storage systems. A more robust discussion was added regarding longer-term energy storage from emerging "power to gas" technologies.
	The latest statistics for biogas production were added.
	The latest information on retail hydrogen fueling stations was provided.
Chapter 11 (Public Process)	Added 33 new stakeholder meetings either conducted since the release of the Draft Plan or scheduled to take place soon.
Appendix I (Health Effects)	The appendix was updated to include the comments received by the Advisory Council and general public.
Appendix II (Air Quality)	Updated with 2015 air quality data to be consistent with the updated data in Chapter 2.
Appendix III (Emission Inventory)	The base year (2012) and future baseline emissions were updated reflecting the latest data from the region's airports, CARB and SCAG.
Appendix IV-A (SCAQMD Control Measures)	Similar additions provided in revised Chapter 4 were added to Appendix IV-A regarding: the policy of prioritizing zero emission technologies, if cost effective and feasible, and near-zero emission technologies in all other applications; the consideration of life cycle in-basin emissions related to energy/fuel production and transmission; and clarification of the role of incentives to complement regulations and accelerate deployment of cleaner technologies.
	Updated NOx and VOC emission reductions in 2031 for CMB-01 and NOx emission reductions in 2031 for CMB-02.
	Modify the adoption and implementation dates for EGM-01, MOB-01, MOB-02, MOB-08, MOB-09 and MOB-13.
	Provided clarification regarding the four approaches to implement CARB's "Further Deployment of Cleaner Technologies": incentives, regulations, operational efficiency benefits, and intelligent transportation systems.
	Examples of commercially available zero-emission vehicles and equipment were provided including plug-in hybrids, battery-electric and fuel cells.
	Clarity and timelines were added for the SCAQMD mobile source/facility-based measures including public process, identifying potential actions (voluntary and regulatory), and a schedule for reporting back to the SCAQMD Governing Board. After one year, recommendations will be made based on the progress achieved.
	Added enhanced description of SCAQMD Clean Fleet Vehicle Rules, including the potential for new or modified rules to focus on zero- and near-zero emission vehicles, within the SCAQMD legal authority.
	Reminder of the existing San Joaquin Valley APCD indirect source rule that requires evaluation and consideration for adoption by the SCAQMD.
	Note the SIP approval considerations for emissions reductions from incentive based programs.

Specific Revisions
Highlighted BCM-01 as a contingency measure in 2025.
Provide the ammonia (NH3) reductions from BCM-04.
Clarified that TBD measures for the SCAQMD stationary source measures may require further emissions inventory and technology feasibility evaluations, but if emission reductions are eventually achieved, they could be applied toward contingency, a shortfall in reductions from other measures or, credited toward rate-of-progress requirements.
Improve ECC-03 description including target goals, replacements with solar, fuel savings and appliance efficiency gains.
Added participation in development of the Title 24 net zero energy residential building standards as part of ECC-03 (<i>Residential Energy Use</i>).
Update NOx and VOC emission reductions for 2031 from summer planning and annual average inventories in CMB-01.
Added a regulatory approach to CMB-01 to require alternatives to the installation of new diesel backup generators in feasible applications, with a priority on zero emission technologies such as batteries and fuel cells. As such, more background was provided regarding fuel cells, the energy sector, and regulatory history.
Further clarity added to the proposed method of control for CMB-01 including consideration of life-cycle analysis, the purpose for regulation and incentives, and interest in working group participation in the development of the rule/program.
A more robust discussion in CMB-01 of engines, boilers, and ovens/furnace replacements was added with consideration of the different types of facilities.
More detailed discussion of municipal solid waste, landfills and wastewater facilities was added to CMB-01.
CMB-01 incentive effectiveness updated for each category including how the reduction would be achieved (e.g., meeting higher tier standards, retrofitting with low-emitting equipment, cleaning up biogas).
Modified the title of CMB-02 to "Emission Reductions from Zero-Emitting or Low-NOx Appliances in Commercial and Residential Applications."
Updated NOx emission reductions for 2031 from summer planning and annual average inventories in CMB-02.
Consider implementation of CMB-02 through California building codes, energy regulations and Title 24 standards.
Updated the values and provided a range of the cost effectiveness of implementing CMB-02.
Provided more background regarding non-refinery flares in CMB-03 including increased biogas burning and waste diversion efforts.
Clarified the applicability of CMB-03 and provided more detailed discussion of the alternative technologies to flaring.
Clarified the proposed method of control for CMB-04 and added consideration of residential appliances in addition to commercial cooking.

Specific Revisions
Clarified how the cost effectiveness values were derived in CMB-04.
Modified the NOx RECLAIM measure (CMB-05) to emphasize consideration of a long-term transition of the program to a command-and-control regulatory structure, essentially a sunset of RECLAIM.
Added the anticipated facilities affected by FUG-01 and provided updated cost effectiveness values.
Provided more detail and updated values for the cost effectiveness of BCM-10.
Updated NOx, SOx and PM2.5 emission inventory for 2012, 2022, 2023 and 2025 for MOB-01.
Clarity has been added to the facility-based measures (MOB-01, MOB-02, MOB-3, MOB-04) in terms of process and schedule. These measures are proposed to help implement the State SIP strategy "Further Deployment of Cleaner Technologies" measures and provide specific implementation approaches to the State measures. The proposed approach is to work collaborative with affected stakeholders, CARB, U.S. EPA, environmental and community organizations to identify actions that potentially result in additional emission reductions to help meet the emission reduction commitments associated with the State SIP "Further Deployment" measures. Identified emission reductions may be credited to the SIP as part of Rate-of-Progress Reporting and in future AQMP revisions. Any emission reductions proposed to be included in the SIP will require development of enforceable commitments (as defined by U.S. EPA). The progress in identifying actions will be reported to the SCAQMD Governing Board six months after Plan adoption. After one year, SCAQMD staff will report to the SCAQMD Governing Board on overall progress. If sufficient actions or progress are not envisioned to occur in a timely manner, SCAQMD staff will seek the SCAQMD Governing Board's direction as to whether to proceed with formal rule development or develop alternative implementation processes.
Added regulatory background of the state funded appropriation for the upcoming year in MOB-06.
Provided more robust regulatory history of MOB-07 including the Carl Moyer Program, SB1107 funds, AB923, AB118, AB 8 and appropriation from the Greenhouse Gas Reduction Fund.
Clarified in MOB-07 deployment of electric hybrid vehicles where feasible and near-zero emissions in other applications. Fleets are encouraged to acquire near-zero in the near-term to help meet the fast approaching deadlines of the standards where there are no commercially available zero-emission vehicles.
Added the potential to develop new or expanded fleet rules within the legal authority of SCAQMD under MOB-08.
 Quantified the NOx emission reductions in 2022 for MOB-10.
Quantified the VOC and CO emission reductions in 2023 and the NOx, VOC and CO emission reductions in 2022 from MOB-11.
Proposed lowering the headcount animal threshold in BCM-04 in order to comply with RACM demonstration that would require amendments to existing SCAQMD Rule 223.
Provided ammonia (NH3) emission reductions by 2023 and 2031 from the modification of Rule 223 pursuant to BCM-04.

	Specific Revisions
Appendix IV-B (CARB Control Measures)	No change from Draft Plan.
Appendix IV-C (SCAG Control Measures)	Minor clarifications have been made in responses to comments received. Does not change the overall goals set out in SCAG's Final RTP/SCS.
Appendix V (Modeling/ Attainment Demo)	No change yet from Draft Plan.
Appendix IV-C (Other CAA Requirements)	No change yet from Draft Plan.